October 10, 2013

Mr. Phil Perry
Compliance Branch Chief, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Ave.
Indianapolis, IN 46204-2251

Re: Indianapolis Power & Light Company (IPL)
Petersburg Unit 2 (Source ID: 125-00002)
Fall 2013 Outage

Dear Mr. Perry:

Indianapolis Power & Light Company (IPL) will begin a regularly scheduled planned outage at the Petersburg Generating Station's Unit 2 on October 12, 2013. During this outage a number of activities will be performed. IPL does not believe any of these activities are modifications subject to the New Source Review (NSR) program but is submitting this letter and report in light of the uncertainty associated with the NSR program and as a necessary component for preserving a defense that only may be available if the data is submitted.

For NSR to apply, the emissions unit must undertake a "major modification;" that is, a physical or operational change that results in a significant net emissions increase. 326 IAC 2-2-2. Projects that are routine maintenance, repair and replacement are excluded from the definition of major modification irrespective of their impact on emissions. 326 IAC 2-2-1(dd).

While IPL believes this submission is not necessary to conclude NSR is inapplicable to these activities, IPL makes this submission because of the current uncertainty concerning the scope of the routine maintenance, repair and replacement exclusion, the applicable emissions test and the meaning of the "no reasonable possibility" standard. Therefore, to satisfy, if necessary, any pre-project submission requirement for the applicability of the baseline actual-to-projected-actual annual emissions test in the revised regulations, IPL submits a description of the activities to be performed during the planned outage on Petersburg Unit 2 (*see Attachment B*) and a description of emissions analyses that demonstrates that these activities would not be expected to result in a significant emissions increase or a significant net emissions increase of any NSR regulated pollutant (*see Attachment A*). Baseline actual emissions and projected actual emissions are included for the following NSR regulated pollutants: SO2; NOx; PM; PM_{10}; CO; ozone (VOC); elemental lead; beryllium; mercury; fluorides; sulfuric acid mist; CO_2; N_2O; and CH_4. TRS Compounds (including H2S) are assumed to be negligible due to oxidative environment in the combustion process and are therefore not included.

As described in the submission and based on the analyses performed with respect to these pollutants, IPL does not believe that any of these activities would be major modifications subject to NSR. We understand that the regulations do not require a response from IDEM as the result of this submittal. Should you have any questions regarding this submittal, please contact me at (317) 261-5852.

Regards,

Angelique Oliger
General Counsel, Senior Environmental Coordinator
Indianapolis Power & Light Company

cc: Vickie Cordell, IDEM
Pat Austin, IDEM
Jeff Harter, IPL
Byron Taylor, SA

enclosure

Attachment A: IPL Petersburg Generating Station Unit 2 Emissions Analysis

***** INDIANAPOLIS POWER AND LIGHT - PETERSBURG - UNIT 2 *****

Capacity	4144	MMBTU/hour	Capacity Change	N	

COAL			OIL		
Heat content	11437	BTU/lb	Heat content	139320	BTU/gal
Percent Sulfur	3.05	%	Percent Sulfur	0.36	%
Percent Ash	8.4	%			

ESP control efficiency 99.49

POLLUTANT	PSD/ Emisison Offset Major Modification Threshold , tons/year	Unit Potential to Emit, tons/year[a]	Baseline Actual Emissions, tons/year	Potential to Emit minus Baseline Actual [a] tons/year	Future Projected Actual Emissions, tons/year	Future Projected Actual minus Baseline Actual[b], tons/year	Could have Accomodated Emissions - Availability [c], tons/year	Net Emissions Increase [d], tons/year
PM	25	601.0	456.5	144.5	496.0	39.5	30.3	9.1
PM-10	15	365.2	277.5	87.7	301.6	24.1	18.4	5.7
PM-2.5	10	364.3	276.8	87.5	300.8	24.0	18.3	5.7
SO2[e]	40	108,904	5,805	103,100	2,428	-3,377	600	-3,976
NOx	40	3,674	2,532	1,142	1,927	-605	740	-1,345
VOC	40	47.6	36.2	11.4	39.3	3.1	2.4	0.7
CO	100	651.4	302.1	349.3	328.8	26.7	19.6	7.1
Lead	6.00E-01	1.97E-01	7.07E-03	1.90E-01	7.88E-03	8.09E-04	3.09E-04	4.99E-04
Beryllium	4.00E-04	5.45E-02	2.33E-04	5.42E-02	2.71E-04	3.79E-05	2.89E-05	9.00E-06
Mercury	1.00E-01	7.06E-02	5.36E-02	1.70E-02	5.83E-02	4.63E-03	3.57E-03	1.06E-03
Fluorides	3	84.5	64.2	20.3	69.7	5.5	4.3	1.2
H2SO4	7	52.0	39.5	12.5	42.9	3.4	2.6	0.8
CO2		3,840,282	2,832,853		3,080,455		185,922	
N2O		63.9	48.5		52.8		3.2	
CH4		31.9	24.3		26.4		1.6	
CO2e	75,000	3,860,753	2,848,409	1,012,343	3,097,362	248,952	186,952	62,000

Notes:
a - Potential to emit includes physical or operational limitations which are enforceable as a practical matter (see 326 IAC 2-2-2(ll)).
b - for pollutants where the Potential to Emit minus the actual emissions baseline is < major modification threshold, future actual records are not required. (see 326 IAC 2-2-1(pp)(2)(B)).
c - "Could have accommodated emissions" are calculated based on annual emissions summed from each calendar month as calculated by subtracting the actual emissions for the month from the maximum monthly emissions for the baseline period. (see 326 IAC 2-2-1(pp)(2)(A)).
d - Net emissions increase is the Future Projected actual emissions (adjusted for emisisons that could have been accomodated) minus the past actual emissions. For those pollutants where the value is less than the PSD major modification threshold and for which the PTE minus past actual value is not less than the major modification threshold, records must be kept to demonstrate, on an annual basis, that the future actual emissions are not greater than the Future Projected Actual Emissions(see 326 IAC 2-2-1(ii)).
e - Pike County (Washington Township) hs been designated as nonattainment for SO2.

IPL Petersburg
Unit 2 Fall 2013 Outage Work Summary
October 12 thru December 13, 2013

1. Mercury and Air Toxics Standard (MATS) Compliance Preparation Activities (associated with Baghouse) – $67.6M
    a. Replace Unit 2 transformers
    b. Install new Power Distribution Center (PDC)
    c. Install Soft Start Building
    d. Connect new transformers to the new PDC
    e. Connect new PDC to Soft Start equipment
    f. Replace Unit 2 Booster Fans and Motors
    g. Replace Inlet and Outlet Ducts for the Unit 2 Booster Fans
    h. Connect Soft Start equipment to the new Booster Fan Motors
    i. Pull new power cabling to feed the 2-1 and 2-2 ID Fans
    j. Check out and start-up of new equipment and systems

2. Top Ash/Ash Tank/Bottom Ash – ($200K (Operations/Maintenance (O/M))
    a. Bottom ash system maintenance to ash evacuation system and lines
    b. Bottom ash pipe inspections and repairs
    c. Bottom ash gate inspections and repairs
    d. Top Ash system maintenance and repairs
    e. Seal trough header repairs
    f. Repair ash tank flush nozzles and associated piping

3. Boiler System/Furnace – ($2M O/M Furnace and boiler Valves – $400K High Energy Piping)
    a. State Inspections
    b. Hot Reheat piping inspections, Nondestructive Examination of and ultrasonic test mapping
    c. Full boiler scaffolding and inspections of main furnace and back pass
    d. Boiler Pressure Part inspections
    e. Boiler valve repairs including all safety valves
    f. 2-1 and 2-4 Boiler Circulating Water Pump (BCWP) Refurbishment
    g. Upgrade BCWP Pump reservoirs to larger capacity
    h. Repair water cooled door
    i. 2-1 and 2-4 BCWP Casing Replacements
    j. Replace 5 lower loop sections on division panels
    k. Repair insulation and lagging around boiler
    l. Oxide scale survey
    m. Steam Drum Repairs
    n. Mud Drum Repairs
    o. Compartmentalized panel water wall tube replacement on C corner

4. Boiler Air - ($750K O/M)

a. Air Pre-heater wash and repairs
b. Fan damper inspections
c. Duct repairs
d. Duct stiffener repairs
e. Air & by-pass seal inspection & repairs
f. Induced Draft, Forced Draft (FD), Primary Air Fan inspections and repairs
g. Replace 2-1 and 2-2 Air Preheater Support Bearing
h. Replace 2-1 and 2-2 Guide Bearing
i. Refurbish 2-1 FD Fan Motor

5. Boiler Fuel – ($2.1M O/M)
    a. Coal Feeder & feeder motor repairs
    b. Burner and air tip inspection and repairs
    c. Pulverizer maintenance
    d. Overhaul 2-4 pulverizer
    e. Overhaul 2-4 Exhauster
    f. Various coal piping repairs and replacement
    g. Replace S-gate on 2-3 Exhauster
    h. Replace cone in 2-1 pulverizer
    i. Pulverizer deluge testing
    j. Replace primary air riffle elements with adjustable design
    k. Change air tips and grills
    l. Windbox damper repairs

6. Circulating Water ($225K O/M,)
    a. De-mudd, clean and inspect Unit 2 traveling water screens
    b. Circulating water line inspections
    c. Preventive Maintenance cooling tower inspections
    d. Refurbish Motor Operated Valve (MOV) 50 and MOV 51 at cooling tower

7. Condensate System ($200K O/M,)
    a. Condensate valve repairs
    b. Piping repairs (Operations & Maintenance)
    c. Condenser tube cleaning
    d. Seal water line inspection and repairs
    e. Polishing filter inspections
    f. 2-1 2-1 Condensate Pump Motor refurbishment

8. Electrical ($725K O/M)
    a. Recondition of low and med-voltage breakers (quantity of 37)
    b. Switch gear cleaning (C, D CX, DX, BDX buses)
    c. General control cabinet cleaning
    d. Calibrate turbine instrumentation
    e. Anti-Water Induction Testing
    f. Refurbish 19 motors, service balance of plant

9. Environmental - Precipitator ($1,100K O/M)
    a. Inspection and repairs
    b. Precipitator wash
    c. Overhaul rapper drive units
    d. Clean bushings/high voltage
    e. Repair rapper sleeves & hammers
    f. Repair perforated-plate
    g. Complete structural inspection
    h. Repair curtains and sneak baffles
    i. Repair/Replace (6) rapper drive motors and gearboxes

10. Feedwater System ($860K O/M)
    a. Valve inspections and repairs
    b. Inspect & repair seal water injection valves
    c. Feedwater heater inspections and repairs
    d. Boiler Feed Pump Inspections and servicing
    e. Clean coolers on hydraulic coupling

11. Sootblower System ($250K O/M)
    a. Full sweep check of wall blowers
    b. Replace sootblower sleeves and refractory
    c. Repair or replace elbows and fittings in supply line

12. Turbine – Generator Systems ($4,200K O/M)
    a. Full Turbine Overhaul
    b. Repair & clean H2 coolers
    c. Clean lube oil coolers
    d. Change generator resin
    e. Inspect & repair Fluid Drive Coupling
    f. Clean Turbine Lube Oil Tanks

13. Misc – ($950K O&M)
    a. Lubricant & oil changes
    b. Service Tech's and Engineering

14. Scrubber/FGD – (O&M $1,259K)
    a. Cleaning (jetting, washing, vacuuming, etc.)
    b. Inspections & repairs
    c. Hydroclone work
    d. Tower header/nozzle, packing, & tank agitator work
    e. Electrical work
    f. Booster fans, vanes, dampers, ductwork, etc.

15. CapEx – Unit & Flue Gas Desulfurization (FGD)
    a. Unit Boiler controls & associated equipment, etc ($5,089K)
    b. Unit Boiler finishing superheat pendants ($2,091K)

c. Unit Boiler water cannons for sootblowing ($2,140K)
d. Breeching/ductwork, insulation, lagging, expansion joints, etc ($990K)
e. Unit Boiler bottom ash hopper repairs ($1,846K)
f. Valves, isolation gates, etc ($1,087K)
g. Unit Boiler waterwall upper slope tubes ($1,573K)
h. Unit Motor Control Center electrical ($1,246K)
i. Unit Cooling Tower electrical ($733K)
j. Unit Condenser re-tube ($686K)
k. Unit Forced Draft Fan & vanes ($670K)
l. Unit Combustion Air Heater coils ($618K)
m. Unit Generator Exciter ($521K)
n. Pumps, strainers, etc ($796K)
o. Piping, etc ($660K)
p. Electrical, controls, instrumentation, etc ($825K)
q. Unit Turbine/Generator, etc ($450K)
r. Unit Precipitator ($200K)

16. Selective Catalytic Reduction
    a. Replace top & middle layer catalysts ($800K – O&M)
    b. Regenerate two layers of catalyst ($1,167K – O&M)
    c. Vacuuming, scaffolding, sonic horn, valve work, etc ($300K – O&M)